DOCUMENT RESUME

ED 167 595 TM 008 368

AUTHOR Griffore, Robert J.
TITLE Fear of Success: Its Measurement and Its Impact On College Students' Academic Performance.
PUB DATE Mar 78
NOTE 34p.; Paper presented at the Annual Meeting of the American Educational Research Association (62nd, Toronto, Ontario, Canada, March 27-31, 1978)

EDRS PRICE MF-$0.83 HC-$2.06 Plus Postage.
DESCRIPTORS *Academic Achievement; *College Students; Complexity Level; *Expectation; *Fear of Success; Higher Education; *Performance Factors; *Sex Differences; Student Motivation
IDENTIFIERS Debilitating Anxiety Scale (Alpert and Haber); Fear of Failure; Fear of Success Questionnaire (Pappo); Fear of Success Scale (Zuckerman and Allison); Horner (M)

ABSTRACT

Two experiments were conducted to determine: (1) whether fear of success, as measured by three different instruments, interacts with subjects' expectancies of success to affect performance on exams in college courses; (2) whether fear of success can be clearly distinguished from fear of failure; and (3) whether males and females differ on fear of success. In the first experiment, using 68 graduate students, scores on only one fear-of-success instrument interacted with expectancies in the hypothesized direction, but on the second experiment, using 68 undergraduates, this interaction was not obtained. Fear of failure was found to be related independently to exam performance in the first experiment, however. While positive correlations were not consistently found between the three fear-of-success measures, all three were positively and significantly correlated with fear of failure. Males and females did not significantly differ on fear of success. (Author/GDC)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED167595

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

Fear of Success: Its Measurement And Its Impact On College Students' Academic Performance

Robert J. Griffore

Michigan State University

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Robert J. Griffore

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

TM008 368

Presented at the Annual Meeting of the American Educational Research Association, March 27-31, Toronto, Canada
Session 30.06

Printed In U.S.A.

Abstract

Two experiments were conducted to determine whether fear of success, as measured by three different instruments, interacts with subjects' expectancies of success to affect performance on exams in college courses, whether fear of success can be clearly distinguished from fear of failure, and whether males and females differ on fear of success. In the first experiment, using 68 graduate students, scores on only one fear-of-success instrument interacted with expectancies in the hypothesized direction, but on the second experiment, using 68 undergraduates, this interaction was not obtained. Fear of failure was found to be related independently to exam performance in the first experiment, however. While positive correlations were not consistently found between the three fear-of-success measures, all three were positively and significantly correlated with fear of failure. Males and females did not significantly differ on fear of success.

Fear of Success: Its Measurement And Its Impact on College Students' Academic Performance

The construct of fear of success has risen to a status of substantial importance. Not only does it continue to be the subject of current investigation, but a recent book (Tresemer, 1977) chronicles the work which has hitherto been conducted on the construct.

The essential core of the contemporary theory of fear of success is very straightforward and uncomplicated by qualifications or details. The fear-of-success theory which is now most often recognized does not spring from psychodynamic notions of a "success neurosis"; rather, it stems from the inability of achievement motivation theory to adequately account for academic achievement especially for females. Atkinson (1974) has described an expectancy-value theory of achievement-oriented behavior in which performance is inhibited by the motive to avoid failure. O'Leary (1974) has suggested that the motive to avoid failure might be particularly influential in inhibiting females' achievement-oriented behavior. Since females might be socialized to be less competitive, when they find themselves in competitive situations, they may become extremely anxious, and they may suppress their performance in order to prevent failure.

Horner (1974) proposed that the Atkinson theory, taking into account both the achievement motive and the motive to avoid failure, still does not explain why females' achievement is not typically

aroused by events which are sufficient arousal conditions for males' achievement motive. She introduced the construct of fear of success as a third motive which would adapt expectancy-value theory to females. Horner's notion is that fear of success acts as an inhibiting factor in expectancy-value theory as does the motive to avoid failure. Females' fear of success might be especially aroused in competitive situations in which success might threaten their femininity and result in some degree of social rejection. Therefore, in order to avoid social rejection and a threat to their feminine status, they will probably suppress their academic achievement to some degree. Since males need not fear rejection or loss of status as a consequence of academic achievement, the theory suggests that they should have less fear of success than females. The effects of fear of success on performance and the existence of a sex difference have been two of the most frequently investigated issues.

The fear-of-success literature is both expansive and inconclusive. As Tresemer (1976) notes, measured fear of success does not consistently relate to theoretically important variables. In other words, the nomological net defining fear of success has not been clearly defined. Many predictions which have been derived from fear-of-success theory have failed to gain empirical support. One of the factors possibly accounting for this is that researchers have operationally defined the variables in the nomological net of fear of success in a variety of ways. Inconsistencies in operational definitions of these variables are difficult to reconcile.

Continuing attention to the construct of fear of success is perhaps attributable to its current state of disorder, which suggests the need for future research. Zuckerman and Wheeler (1975) suggest that another reason for its popularity is that it seems "intuitively reasonable." For these and perhaps other reasons, the research on fear of success continues, and some areas of research attract repeated investigation. One such area is the measurement of the construct. There have been several attempts in recent years to devise new instruments for measuring fear of success, perhaps deriving from dissatisfaction with Horner's (1968) original projective technique. Horner, Tresemer, Behrens, and Watson (Note 1), therefore, devised an empirically-derived, fantasy-based scoring system. Most other fear-of-success instruments have been self-report, objectively scorable questionnaires (Zuckerman & Allison, 1976; Pappo, 1972). But although these questionnaires all purport to measure fear of success, the equivalence of these scales must be demonstrated empirically. Scores on these instruments should be at least moderately correlated, and they should not be significantly correlated with scores on an instrument which has been used to measure fear of failure. Indeed, the addition of fear of success to expectancy-value motivation theory rests on the distinction between these two constructs.

A second issue to which much research has been addressed is whether there are sex differences in fear of success. Horner's (1968) original research found that females had more fear of success than

males, but several other studies fail to support this finding (Zuckerman & Wheeler, 1975). It is not surprising that the results of various studies have been inconsistent because the conditions used to arouse fear of success have varied widely across these studies. Since the presence or absence of a sex difference depends on both the sample characteristics and the arousal conditions, the finding of any particular study may contribute to the present confusion on the issue of sex differences. On the other hand, the addition of other well-designed studies to the literature may begin to show a trend which suggests resolution of the issue.

A third question to which some research has been addressed is whether fear of success actually influences performance on competitive tasks. This is probably the most essential and important question, since its answer either supports or challenges the inclusion of the construct into expectancy-value motivation theory. Studies investigating the effect of fear of success on performance have either considered its effect independent of other factors, or in interaction with other factors characteristic of academic learning situations. Eme & Lawrence (1976), using a sample of 9th grade students, found no significant correlation between fear of success, measured by the scoring system developed by Horner, Tresemer, Behrens, & Watson (Note 1), and school achievement. While this study examined the independent effect of fear of success on achievement, most other studies have considered its interaction with other factors. In a study by Karabenick & Marshall (1974) female subjects worked on an

alpha-numeric substitutions task, which involves the rapid substitution of letters for numbers, either alone, opposite a female, or opposite a male. The condition interacting with fear of success to influence performance on this task was feedback that they had done better, worse, or similar to competitors on a similar previous task. The interaction of fear of success with feedback was not found to be related to performance on the second task.

The arousal conditions across studies have not been consistent. In some studies, subjects have been informed about previous success, as in the Karabenick & Marshall (1974) study, while in other studies, subjects were given information about the difficulty of the task. Patty (Note 2) informed female subjects that tasks were either easy or difficult. She found that high-fear-of-success females performed better when they were informed the tasks were easy, while low-fear-of-success females performed better when the tasks were described as difficult. This finding runs contrary to predictions which would be derived from fear-of-success theory. It would be expected that on easy tasks, where the subjective expectancy of success is increased, high-fear-of-success subjects should suppress their performance. However, Zanna (Note 3) found that fear of success did not relate to the performance of females working on either easy or difficult tasks, opposite either males or females.

Not only has the interaction of fear of success with the subjective probabilities of tasks not been demonstrated to affect performance systematically, but many of the studies have utilized rather

contrived, artificial tasks. The effects of fear of success on regular course examination scores have not been adequately defined. In order to address the issues associated with fear of success identified above, two experiments were conducted. Several general research questions were posed. First, using either labeled item difficulty or feedback on previous examinations to affect students' expectancies of success, does fear of success interact with these expectancies to influence examination performance? Second, can fear of success be distinguished from fear of failure? Third, does fear of failure interact with item difficulty to affect examination performance? Fourth, do females have higher fear of success than males, as the theory would predict?

Experiment 1

Method

Subjects

The subjects were 68 graduate students enrolled in graduate education courses. The mean age of these 54 females and 14 males was 29 years. Based on measures of mother's and father's educational attainment and occupational status, the subjects were predominantly lower-middle class.

Procedure

Three recently developed fear-of-success instruments were utilized in the present study: Horner's empirically-derived fantasy-based scoring system, Pappo's Fear of Success Questionnaire (FOS) and

Zuckerman and Allison's Fear of Success Scale (FOSS). The empirically derived fantasy-based scoring system, developed by Horner, Tresemer, Behrens, and Watson (Note 1), assigns a fear-of-success score on the basis of six categories of responses to two or three unspecified verbal cues. These categories are contingent negative consequences of success, noncontingent negative consequences, interpersonal interaction, alleviation of tension or deprivation, absence of activity toward attaining a goal, and absence of other characters in the story except for the individual identified in the verbal cue. The cues utilized in this experiment were as follows:

1. Student #1 is an undergraduate who holds a part-time job as well. Often while at work, his/her mind is preoccupied. Today, he/she is staring into space, deep in thought.

2. During a final exam, Student #2 pauses to reflect on the meaning of the class and the exam. He/she is looking at the others in the class who appear to be concentrating on the exam.

3. At the end of his/her freshman year, Student #3 has a higher grade point average than anyone else he/she knows personally.

The interrater reliability between two independent scorers of this instrument was .87.

The second measure of fear of success was the Zuckerman and Allison (1976) Fear of Success Scale (FOSS). This is a 27 item questionnaire on which subjects either agree or disagree with items considered to be indicative of fear of success. The items describe either the benefits of success, the cost of success or the respondent's attitudes

toward success compared to other alternatives. The authors of the test report a low (.18) but significant correlation between the scale and Horner's original fantasy-based scoring system for females.

The third fear-of-success instrument used was the 83 item Fear of Success Questionnaire (FOS) developed by Pappo (1972). The reported reliability of the questionnaire is .90. It is constructed to measure the following five dimensions of fear of success: self-doubt, preoccupation with competition, preoccupation with evaluation, repudiation of competence, and self-sabotage behavior.

The Alpert-Haber Debilitating Anxiety Scale was administered as a measure of fear of failure. This scale consists of 10 items from the Achievement Anxiety Test (Alpert and Haber, 1960), and has been used by Horner (1968) to measure fear of failure.

One week before the end of the term, all 68 students completed a questionnaire containing indices of their sex, age, and SES. All three fear-of-success instruments and the Alpert-Haber Debilitating Anxiety Scale were also administered.

Final examination scores were obtained. In all cases, the regular final examination was used, but each item was labeled with its difficulty, as empirically established by item analyses of early administrations of the exams. The item difficulty distributions were trichotomized, and items were labeled as "high," "medium," or "low" in difficulty. The ranges of item difficulties at each difficulty level were equated across all classes.

Results and Discussion

To begin the analysis, three repeated measures analyses of variance were calculated. In each, the independent variables were fear of success and item difficulty, with repeated measures obtained on low-, medium-, and high-difficulty final examination items. Separate analyses were conducted using first the Horner, then the FOS, and then the FOSS as measures of fear of success.

Then three repeated measures analyses of covariance, using fear of failure as the covariate, were calculated. In each of these, the independent variables were fear of success and item difficulty, with repeated measures taken on low-, medium-, and high-difficulty final examination items. One of the three measures of fear of success was used in each analysis. For both the analysis of variance and the analysis of covariance, scores on each fear-of-success measure were dichotomized as high or low at the median score. Scores around the Horner median of 5 ranged from 0 to 13, while on the FOS, the median was 37, and the scores ranged from 16 to 98. On the FOSS, the median was 108, and the scores ranged from 66 to 140.

Three additional repeated measures analyses of covariance were calculated, as above, with sex added as a third independent variable.

Next, a repeated measures analysis of variance was calculated in which fear of failure and item difficulty were the independent variables, with repeated measures obtained on low-, medium-, and high-difficulty final examination items.

Then these analyses were repeated, using fear of success as a covariate. In the first of these, the covariate was the Horner instrument, in the second, the Pappo FOS, and in the third, the Zuckerman and Allison FOSS. Fear of failure scores, measured by the Debilitating Anxiety Scale, were dichotomized as high or low at 27, the median score. Scores ranged around the median from 15 to 44.

Finally, three additional repeated measures analyses of covariance were calculated, as above, with sex added as a third independent variable in addition to fear of failure and item difficulty.

The question addressed by these analyses was whether either fear of success or fear of failure influence examination performance, when the other is controlled.

To determine whether females score higher than males on fear of success or fear of failure, four t-tests were conducted. These included one t-test for the Horner empirically-derived instrument, one for the Pappo FOS, one for the Zuckerman and Allison FOSS, and one for the Alpert-Haber Debilitating Anxiety Scale. In each of these analyses, it was determined whether the difference between the means for females and males was significant.

The final research question asked whether fear of success correlates significantly with fear of failure for males, for females, and for the entire sample. Pearson product-moment correlations were calculated between scores on each of the fear of success measures and fear of failure, for males and females separately and for the entire sample.

Table 1 shows the means and standard deviations on low-, medium-, and high-difficulty items for low-fear-of-success and high-fear-of-success subjects, as measured by each fear-of-success measure. On the Horner instrument, high-fear-of-success subjects scored somewhat lower on medium-difficulty items, as expected, but not on the

---

Insert Table 1 about here

---

low-difficulty items, contrary to expectations. Using the FOS and FOSS, on both low-difficulty and medium-difficulty items, high-fear-of-success subjects scored lower than low-fear-of-success subjects, as hypothesized.

The analyses of covariance calculated on these means produced significant main effects for item difficulty on the Horner instrument, F (2,131) = 9.05, $p < .001$, with the FOS, F (2, 131) = 3.07, $p < .05$, and with the FOSS, F (2, 131) = 4.87, $p < .01$. No significant F ratios were obtained for the main effects of any of these three instruments. The significant main effects for item difficulty were expected since the items were selected according to their previously established item difficulties. And the absence of significant main effects on the fear of success measures was not unexpected. But contrary to expectations, the only significant fear of success by item difficulty interaction was obtained when the FOSS was used to measure fear of success, F (2, 131) = 4.33, $p < .05$. All these F ratios are shown in Table 2.

Insert Table 2 about here

When three additional analyses of covariance, including sex as an independent variable, were calculated, neither the main effect for sex, nor any interaction involving sex were significant at the .05 level.

On the three analyses of covariance involving the DAS and item difficulty as independent variables, significant main effects were obtained for item difficulty. These were $(2, 131) = 23.02$, $p < .001$; $F\ (2, 131) = 11.3$, $p < .001$; and $F\ (2, 131)$, $p < .001$, when the Horner, the FOS and the FOSS respectively, were used as covariates. A significant F ratio was also obtained for DAS, with the Horner instrument as a covariate. This was $F\ (2, 131) = 4.51$, $p < .05$. No significant DAS by item difficulty interactions were obtained.

Insert Table 3 about here

Here again, when three additional analyses of covariance, including sex as an independent variable, were calculated, neither the main effect for sex, nor any interactions involving sex were significant.

In order to determine whether females' mean score was significantly different from males' mean score on each of the measures

of fear of success and on fear of failure, four t tests were calculated. On the Horner, FOS and FOSS instruments, results were t (66) = 1.39, $p < .16$; t (66) = .46, $p < .64$ and t (66) = .66, $p < .50$, respectively.

On the DAS, the result was t (66) = .92, $p < .36$. Clearly, all t tests were statistically insignificant at the adopted .05 level.

Finally to ascertain the relationship of fear of success to fear of failure, Pearson product-moment correlations were calculated between each of the fear of success measures and the DAS for males, for females and for the entire group.

For males, significant correlations were found only between the FOS and the DAS and between the FOSS and the DAS. They were $r = .60$, $p < .01$ and $r = .67$, $p < .005$, respectively. An insignificant correlation, $r = -.15$, $p < .30$ was obtained between the Horner instrument and the DAS.

For females, significant correlations were also found between the FOS and the DAS and between the FOSS and the DAS. These correlations were $r = .49$, $p < .001$ and $r = .44$, $p < .001$, respectively. But for females, a significant correlation, $r = .26$, $p < .05$ was also found between the Horner instrument and the DAS.

For the entire sample, significant correlations were also found between each fear of success instrument and the DAS. Using the Horner instrument, the correlation was $r = .21$, $p < .05$. Using the FOS and the FOSS instruments, respectively, the correlations were $r = .51$, $p < .001$, and $r = .48$, $p < .001$.

Only two significant correlations were obtained between the fear-of-success measures, however. For the group of females, and for the entire sample, the correlation between the FOS and the FOSS is .39, $p < .001$. For males, none of the measures were significantly correlated.

Overall, the results suggest that fear of success does not have an effect on final examination performance independent of item difficulty, when fear of failure is a covariate, and that only when fear of success is measured by the FOSS does it interact with item difficulty to influence exam performance.

Fear of failure, measured with the DAS, appears to influence examination performance somewhat differently. When fear of success, measured by either the Horner instrument, the FOS or the FOSS is a covariate, the interaction between fear of failure and item difficulty is not significantly related to final examination performance. In addition, whereas no significant main effects were found for any of the fear-of-success measures, the DAS is significantly and independently related to final examination performance, when the Horner measure is used as a covariate.

Although the effects of fear of failure on examination performance are somewhat different from those of fear of success, neither fear of failure nor fear of success exercised a large influence on examination performance. It is interesting to compare the results of the analysis of variance with DAS and item difficulty as independent variables with the results of the analyses of covariance

using each of the fear of success measures as covariates. The amount of reduction in variance obtained when the covariates were entered was very substantial. This finding is consistent with the relatively high correlations obtained between each fear of success instrument and the DAS. It is not clear that fear of success is distinguishable from fear of failure.

Females were not found to have significantly more fear of success or fear of failure than males. This contradicts the research of Horner (1968) and others. Zuckerman and Wheeler (1975) observe that consistent sex differences have not been found on fear of success. In the sample of graduate and professional students selected for the present experiment, perhaps the women did not fear the social ostracism and deflation of their feminine status which would arouse fear of success. Indeed, Komorovsky (1973) has reported that college men tend to have more respect for women who work and achieve than they do for housewives.

Experiment 2

Method

Subjects

The subjects were 40 male and 60 female undergraduate students enrolled in psychology classes at the State University College, Plattsburgh, New York. Based on fathers' and mothers' educational attainment and occupational status, the subjects were predominantly lower-middle class.

Procedure

During the first meeting of their psychology class, all subjects took a pretest which measured their previous attainments of course-related entry skills. Matched pairs of subjects were then formed on the basis of subjects' pretest scores, and those pairs which had scored "average," or in the middle third of their class, and those who had scored "below average," or in the lowest third, were randomly assigned independently to one of two feedback conditions. In one condition, subjects were told that they had performed better on the pretest than they actually had (inaccurate-high feedback), while in the other condition, subjects were given accurate feedback. The random assignment was performed on pairs of subjects matched on pretest performance to counterbalance entry skills across feedback conditions. All students who had, in reality, scored in the upper third of the distribution of the pretest were all given accurate feedback and were not included in the experiment to prevent exposing them to a possibly aversive experience. Each student was then administered the Zuckerman and Allison Fear of Success Scale (1976) and identified as either a high- or low-fear-of-success student, based on a dichotomization of the distribution at the median of 108.

In all, eight groups were formed; the 17 matched pairs of subjects in the lower third of the distribution of pretest scores and the 17 matched pairs in the middle third formed the two major groups each of which was then divided into four groups. One member

of each pair was given accurate feedback while the other received inaccurate feedback. Each of these groups was further dichotomized on the basis of subjects' levels of fear of success (high or low).

At the end of their psychology courses, all subjects took a comprehensive final examination.

Results and Discussion

The experiment is conceptually a 2 x 2 x 2 factorial design (Pretest Score (average or below average) X Feedback Condition (accurate or inaccurate) X Fear of Success (high or low)). The mean final examination scores for each of the groups in this design are shown in Table 4.

Insert Table 4 About Here

These scores were subjected to a 3-way analysis of variance in which the independent variables were Pretest Score, Feedback Condition, and Fear of Success. The results of this analysis of variance are shown in Table 5. Neither the main effects, nor the two-way interactions, nor the three-way interaction were significantly related to final examination performance.

Insert Table 5 About Here

This study was addressed to the question of whether early feedback about pretest performance in a college course, designed to increase students' perceived probability of success, interacts with their fear of success to affect final exam performance. Of course, this interaction would be predicted from theory, since the tendency to avoid success is a multiplicative function of fear of success, or motive to avoid success (Mas), the probability of success (Ps), and the negative incentive value of success (Ias). In short, T-s = Mas x Ps x Ias (Horner, 1974). In other words, the experiment sought to determine whether students' tendency to avoid success, aroused at the beginning of a semester-length course, might remain aroused until the completion of the course. Of course, it was not possible to control all other events which might increase or decrease students' expectations of success during the semester.

It is consistent with fear-of-success theory that individuals adopt an expectancy level above which the tendency to avoid success begins to suppress performance. High-fear-of-success students should, therefore, prefer lower expectancies of success. Should the expectancy rise above this adopted level, then performance would likely be suppressed. But overall, the results of this study do not support the prediction that high-fear-of-success students perform differently from low-fear-of-success subjects as a function of knowledge of success on a pretest. It was not found that fear of success aroused at the beginning of a course interacts with students' expectancies of success to affect overall course performance. But a closer examination of

the results requires some qualifications of this finding. Table 4 shows that in most groups, the means and standard deviations were relatively homogeneous. But high-fear-of-success students who scored "average" on the pretest and who were misinformed "high" about their performance obtained very high final exam scores, while high-fear-of-success students who scored "below average" on the pretest and who were misinformed "high" received very low scores on the final exam. It may be that not all high-fear-of-success subjects had a low preferred level of pretest achievement, or perhaps if they had such a low preferred level, some did not restrict their pretest performance to that level. For whatever reason, some high-fear-of-success subjects scored very low on the final exam, while others scored very high. Perhaps the fear of success of those who scored highest was overcome by a belief that they could succeed after being given inaccurate-high feedback.

Why did some, but not all, high-fear-of-success students suppress their exam performance? Perhaps those who did not suppress their performance were persuaded during the course that they had a chance to do well on the final exam, or perhaps pretest feedback was not an adequate fear-of-success arousal condition for these students. It may be that for these students, academic success does not pose a threat, while it does for those who scored lowest.

General Discussion

The two experiments reported here addressed several questions, the answers to which are important for validating fear-of-success theory as well as the instruments which have been designed to measure fear of success. Both experiments investigated whether college students' fear of success interacts with their expectancy of success on examinations to influence their performance. In the first experiment, with a sample of graduate students, expectancies of success were manipulated by accurately describing the difficulty of examination items. It was not found that fear of success was related independently to examination performance, when fear of success was measured by any of the three selected instruments. Using the Zuckerman and Allison FOSS (1976), however, the interaction between fear of success and item difficulty was significantly related to examination performance in a theoretically consistent way.

In the second experiment, consistent with the first, it was not found that fear of success is significantly related to exam performance independently. But contrary to the first study, the interaction between fear of success and students' expectancies of success, manipulated by giving either accurate or inaccurate feedback pretest scores, was not significantly related to examination performance. These results were obtained in the second experiment even though the FOSS was used to measure fear of success.

The overall contradictory findings between these two studies can perhaps be partly attributed to differences between the graduate

students in the first experiment and the undergraduates in the second experiment. Equally plausible, however, is the nonequivalence of the two fear-of-success arousal conditions. Perhaps if pretest feedback had been used in the first experiment, no interaction would have been obtained. And perhaps the description of item difficulties in the second experiment would have resulted in finding a significant interaction of students' fear of success with their expectancy of success.

Another difference between the two experiments is that the expectancies of success established early in the course in the second might have changed before the exam, while in the first experiment, the expectancies were developed at the time of the performance. In addition in the first experiment, expectancies were manipulated for specific individual items, but in the second experiment, expectancies were not formed for specific tasks. The subjects were led to believe that pretest success should be related to final exam performance. Yet it was not demonstrated that the two tests were similar, or that pretest knowledge would transfer to the final exam. In the first experiment, however, subjects had both the description of each item's difficulty and the items as indices of task difficulty. Since only in the first experiment was the actual task available as a cue, the treatments are probably not equivalent. The contradiction found between the present two experiments might indicate the error in the assumption these two methods are equivalent (Zuckerman and Wheeler, 1975).

Although there is a contradiction between the results obtained in the two experiments on the most general level, it should be remembered that in the second experiment, some differences obtained among high-fear-of-success subjects suggest the presence of some theoretically meaningful differences. What remains unclear is the origin of these differences.

Aside from the interaction of fear of success with expectancy of success, the first experiment investigated whether fear of failure might interact with item difficulty to affect examination performance. While no significant interactions were found, fear of failure was found to be significantly independently related to performance when the Horner instrument was used as covariate. In similar analyses, when the FOS and FOSS instruments were used as covariates, no such relationship was found. The amount of variance removed from the analysis by the covariate was substantial, and this is consistent with the high positive correlations obtained between the fear-of-failure, fear-of-success instruments.

Of particular interest is the fact that the fear-of-success instruments were not found to be highly correlated. In view of this finding, it is not clear what the instruments measure. Since what the instruments measure is not reliably related to examination performance in a logical and theoretically predicted way, it is not clear that they measure the construct of fear of success. But since they do correlate significantly with fear of failure, it may be that

they measure, in part, what the fear-of-failure measure was originally constructed to measure: debilitating test anxiety.

Finally, it was not found in the first experiment that males and females significantly differed on fear of success, regardless of which instrument was used to measure it. Although it is possible that this result is attributable to uncontrolled or random events which may be similarly responsible for the inconsistencies found across other studies, nonetheless, this finding is consistent with the findings of other studies (Tresemer, 1977) and contradictory to Horner's (1968) original finding, thereby challenging an essential notion in fear-of-success theory.

The results of the two experiments reported here are not at all conclusive in their findings. But this is consistent with the existing body of literature on fear of success (Tresemer, 1977). In the last analysis, the construct, its measurement, and especially its educational implications can be called into question.

Table 1

Means and Standard Deviations for High- and Low-Fear-of-Success Students

Item	Horner		FOS		FOSS	
Difficulty	High	Low	High	Low	High	Low
Low						
M	14.09	13.83	13.73	14.17	13.54	14.34
SD	2.09	2.85	2.59	2.43	2.53	2.43
Medium						
M	11.64	12.60	11.45	12.77	11.33	12.89
SD	2.61	2.44	2.59	2.36	2.73	2.13
High						
M	9.06	8.97	9.33	8.71	9.36	8.69
SD	2.76	2.64	2.99	2.34	2.97	2.36

Table 2

Summary of F Ratios for Three Fear of Success Measures, with DAS as the Covariate

Fear of Success Measure	Fear of Success	Difficulty	Fear of Success X Difficulty
Horner	.00	9.05***	1.22
FOS	.17	3.07*	2.36
FOSS	.19	4.87**	4.33*

* $p < .05$

** $p < .01$

*** $p < .001$

Table 3

Summary of F Ratios for DAS with Horner,

FOS or FOSS as the Covariate

Covariate	DAS	Difficulty	DAS X Difficulty
Horner	4.51*	23.02**	1.10
FOS	3.38	11.33**	.45
FOSS	3.38	13.26**	.55

* $p < .05$

** $p < .001$

Table 4

Means and Standard Deviations of Final Exam Scores

Variables	M	SD
Low Pretest	36.44	7.87
Low Fear of Success	38.06	8.29
Accurate Feedback	37.44	7.88
Inaccurate-High Feedback	38.75	9.22
High Fear of Success	35.00	7.40
Accurate Feedback	36.78	5.52
Inaccurate-High Feedback	33.40	8.75
High Pretest	38.66	6.20
Low Fear of Success	37.31	5.63
Accurate Feedback	38.67	3.08
Inaccurate-High Feedback	36.50	6.75
High Fear of Success	40.00	6.62
Accurate Feedback	38.80	7.92
Inaccurate-High Feedback	42.00	3.29

Table 5

Analysis of Variance of Final Exam Scores

Source	df	MS	F	p
Pretest (A)	1	81.934	1.585	.213
Fear of Success (B)	1	3.024	.059	.810
Feedback (C)	1	11.662	.226	.637
A x B	1	137.739	2.665	.108
A x C	1	11.533	.223	.638
B x C	1	.041	.001	.978
A x B x C	1	103.005	1.993	.163
Explained	7	48.839	.945	.479
Residual	60	51.685		
Total	67	51.388		

Reference Notes

1. Horner, M. S., Tresemer, D. W., Behrens, A. E., and Watson, R. I., Jr. Scoring manual for an empirically derived scoring system for motive to avoid success. Unpublished manuscript, Harvard University, 1973.

2. Patty, R. A. The motive to avoid success and instructional set. Paper presented at the meeting of the American Psychological Association, New Orleans, Louisiana, August 1974.

3. Zanna, M. P. Intellectual competition and the female student. (Report to the U.S. Department of H.E.W.). Princeton, New Jersey: Princeton University Press, 1973.

References

Alpert, R., and Haber, R. N. Anxiety in academic achievement situations. Journal of Personality and Social Psychology, 1966, 61, (2), 207-15.

Atkinson, J. W. The mainsprings of achievement-oriented activity. In J. W. Atkinson and J. O. Raynor (eds.), Motivation and Achievement, Washington, D.C.: V. H. Winston & Sons, 1974.

Eme, R. and Lawrence, L. Fear of success and academic underachievement. Sex Roles, 1976, 2, 269-271.

Horner, M. S. Sex differences in achievement motivation and performance in competitive and non-competitive situations. Unpublished doctoral dissertation, University of Michigan, 1968.

Horner, M. S. The measurement and behavioral implications of fear of success in women. In J. W. Atkinson and J. O. Raynor (eds.), Motivation and Achievement. Washington, D.C.: V. H. Winston, 1974.

Karabeneck, S. A. and Marshall, J. M. Performance of females as a function of fear of success, fear of failure, type of opponent, and performance-contingent feedback. Journal of Personality, 1974, 42, 220-237.

Komorovsky, M. Cultural contradictions and sex roles: The masculine case. American Journal of Sociology, 1973, 78, 873-884.

O'Leary, V. E. Some attitudinal barriers to occupational aspirations in women. Psychological Bulletin, 1974, 9 (11), 809-26.

Pappo, M. Fear of success: An empirical and theoretical analysis. Unpublished doctoral dissertation, Teachers College, Columbia University, 1972.

Tresemer, D. The cumulative record of research on "fear of success." Sex Roles, 1976, 2, 217-235.

Tresemer, D. Fear of success. New York: Plenum, 1977.

Zuckerman, M. and Allison, S. N. An objective measure of fear of success: Construction and validation. Journal of Personality Assessment, 1976, 40, 422-430.

Zuckerman, M. and Wheeler, L. To dispel fantasies about the fantasy-based measure of fear of success: Psychological Bulletin, 1975, 82, 932-946.